5

10

15

ABSTRACT

This invention relates to: a method for differentiating osteoclast precursor cells (preosteoclasts) into osteoclasts, which comprises culturing the preosteoclasts in the absence of accessory cells; a method for isolating preosteoclasts, which comprises culturing peripheral blood or joint fluid in the absence of cytokine for 1 to 3 weeks; an preosteoclasts, which is obtainable by the above method; a method for differentiating the preosteoclasts obtained by the above method into osteoclasts, which comprises culturing the preosteoclasts in the absence of accessory cell; an osteoclast, which is obtainable by the above method; a method for screening agents for treating metabolic bone diseases, which comprises using the preosteoclasts or the osteoclasts as described above; and agents for treating metabolic bone diseases, which is obtainable by the above screening method.